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09/450,680

11/30/1999

MITSUJI MARUMO

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8003

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EXAMINER

RAO, SHRINIVAS H

ART UNIT

PAPER NUMBER

2814

MAIL DATE

DELIVERY MODE

05/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

09/450,680

**Applicant(s)**

MARUMO, MITSUJI

**Examiner**

Steven H. Rao

**Art Unit**

2814

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 22-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 22-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

***Response to Amendment***

Applicants' supplemental amendment filed on October 05, 2006 has been entered and forwarded to the examiner on April 15, 2007.

Therefore claims 22,28,29 and 30 as amended by the amendment and claims 23 to 27 and 31 to 33 as previously recited are currently pending in the Application.

Claims 1 to 27 and 34 to 53 were previously cancelled.

***Information Disclosure Statement***

No further IDSs after ones filed on 12/05/2005 and 12/12/2005 have been filed in this application.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 22- 33 and 41 to 52 are rejected under 35 U.S.C. 103 (a) as being unpatentable over AAPR ( Applicants' Admitted Priori Art) in view of Drake et al. ( U.S. Patent No. 5,006,760, herein after Drake). (for response to Applicants' arguments -see section below).

With respect to claim 22, AAPR describes a pod attached to an outside surface of a grounded electromagnetic-shielded chamber having a door and a grounded flange portion around the door on the outside surface and containing a micro-device manufacturing apparatus said pod comprising : walls containing a substrate ( AAPR figure 10) and a lid for an opening defined by said walls ,( AAPR specification page 30 line 29 to page 3 lines24 ) the substrate being transferred between said pod and the grounded electromagnetic -shielded chamber through the opening with said lid in open state .

The limitation, " the substrate being transferred between said pod and the grounded electromagnetic -shielded chamber through the opening with said lid in open state " is taken to be a process step for which a patentable weight cannot be given in a device claim.

See in re Fessman, 180 USPQ 324,326 ( CCPA 1974); In re Marosi et al., 218 USPQ 289, 292 ( fed. Cir. 1983) and particularly In re Thrope, 227 USPQ 964, 966 9Fed. Cir. 1985) all of which make it clear that it is the patentability of the

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final structure of the product gleaned from the process steps, which must be determined in a "product by process" claim and not the patentability of the process. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

The remaining limitations of claim 22 :

wherein said walls comprise an electro magnetic shield member, said electromagnetic shield member including a flange portion contacting the grounded flange portion of the rounded electromagnetic-shielded chamber without any intervening elements there between while the pod is attached to the outside surface.

AAPR describes in specification page 3 lines 17-20 shield metal chambers for EMI protection, it does not specifically mention an electromagnetic shield member provided by said walls.

However Drake in figures 1 , etc. and col. 2 lines 25-31 describes an electromagnetic shield to formed on outer surface that protects the wafer inside from electromagnetic radiation. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Drake's pod including an electro magnetic shield in AAPR'S device for shield metal

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chamber the to form an outer surface that protects the wafer inside from electromagnetic radiation.

( The limitation including a portion to contact the grounded electromagnetic-shielded chamber during the attachment of said pod to the grounded electromagnetic -shielded chamber is described in Drake figure 1, chamber 10 connected to ground through 26).

With respect to claim 23, AAPR describes a pod according to claim 22, wherein said lid is arranged in front of said pod. ( AAPR page 2 lines 29 to page 3 line 12).

With respect to claim 24, AAPR describes a pod according to claim 22, wherein said lid is arranged in a bottom of said pod. ( AAPR page 2 lines 29 to page 3 line 12).

With respect to claim 25, APPR describes a pod according to claim 22, wherein said electromagnetic shield member comprises wire mesh arranged on or within said walls. ( AAPR spec. page 3 lines 21-22).

With respect to claim 26, APPR describes a pod according to claim 22, wherein said electromagnetic shield member comprises metal coatings arranged on said walls. ( AAPR spec. page 3 lines 17-18, inherent instead of the shielded metal covering metal covering can be used).

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With respect to claim 28, AAPR describes an apparatus for manufacturing a device using a substrate, said apparatus comprising : an electromagnetic-shielded chamber, ( AAPR specification page 3 ) a substrate transfer unit in said electromagnetic -shielded chamber, ( AAPR specification page 1 lines 14,24-27, etc.) a pod being attached to an outside surface of said electromagnetic-shielded chamber including a substrate handling unit ( see rejection of claim 22 above AAPR figure 10, specification page 1 lines 25-27) having an electromagnetic shielded ( member) taken to be "chamber" which includes a flange portion in contact with the outside surface and a processing unit placed in said electromagnetic shielded chamber and comprising a wafer chuck for the substrate to be processed wherein said electromagnetic shielded chamber has a door and a grounded flange portion which surrounds said door on the outside surface of said electromagnetic shielded chamber is connected to the ground , and is in contact with the flange portion of the pod without any intervening elements there between while the pod is attached to the outside surface ( Drake figure 1 chamber 10 connected to ground through 26).

With respect to claim 29, AAPR describes an apparatus according to claim 28, wherein said substrate transfer unit transfers the substrate between said electromagnetic -shielded chamber and the pod, ( MPR figure 10,

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specification page 4 lines 17-35) with the door in an open state . ( AAPR figure 10).

With respect to claim 30, AAPR describes an apparatus according to claim 28, wherein the process unit exposes of the substrate to a pattern. ( AAPR specification page 3 lines 25-35)

With respect to claim 31, AAPR describes an apparatus according to claim 28, wherein a lid of the pod is arranged in front of the pod. ( AAPR specification page 3 lines 4-10)

With respect to claim 32, AAPR describes an apparatus according to claim 28, wherein a lid of the pod is arranged in a bottom of the pod. ( AAPR page 2 line 32-34)

With respect to claim 33, AAPR describes an apparatus according to claim 28, wherein the walls of the pod comprises an electromagnetic shield member. ( Drake figure 1 , col. Lines 25-31 , etc.).

B. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPR ( Applicants' Admitted Prior Art ) and Drake et al. ( U.S. Patent No. 5,006,760, herein after Drake) as applied to claims 22-26 etc. above and further in view of Akagawa ( U.S. Patent No. 4,856,904 herein after Akagawa).



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With respect to claims 27 and 35 wherein said electromagnetic shield comprises shielding materials provided in walls of said pod.

AAPR and Drake do not specifically mention shielding materials provided in walls

of the pod.

However, Akagwa fig.2 # 46, 47 and col.2 line 64 and col. 6 lines 64-68 describes shielding materials provided in walls of the pod to provide shield materials in intermetant unspecified locations to reduce the electromagnetic leakage and provide a lighter ( less weight) shield.

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to include Akagwa's shielding materials provided in walls of the pod to provide shield materials in intermetant unspecified locations to reduce the electromagnetic leakage and provide a lighter ( less weight) shield.

With respect to claim 41 Maney describes an improved pod (Maney fig.2 # 90 ) for attachment to an outside surface of a grounded electromagnetic-shielded chamber (10) having a door (99) and a flange portion, around the door, on the outside surface ( 50) and containing a device manufacturing apparatus for processing a substrate (15), said pod including walls for containing the substrate( 90 in fig. 4 has walls) said walls including a flange portion to contact the flange portion of the grounded electromagnetic-shielded chamber;

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and a lid for an opening, defined by said walls, through which the substrate is transferred between said pod and the grounded electromagnetic-shielded chamber, the improvement comprising: an electromagnetic shield member, said electromagnetic shield member covering said walls and arranged on said flange portion of said walls. ( AAPR figures and specification).

### ***Response to Arguments***

Applicant's arguments filed on 01/05/2005 have been fully considered but they are not persuasive, for the following reasons :

Applicants' first argument ( in amendment of 6/16/2006 ) is based on improper piece meal analysis of individual references whereas the rejection is based on the combined teachings of AAPR ( primary reference ) and Drake ( Secondary reference). See *In re Keller* 208 USPQ 871( CCPA 1981).

Applicants' second contention that AAPR will that the previous rejection/s is/are based on including Drake's pod (secondary reference) including an electro magnetic shield in AAPR'S device ( primary reference) for shield metal chamber the to form an outer surface that protects the wafer inside from electromagnetic radiation, whereas Applicants' are attempting to argue why

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including the primary reference's device when included in the secondary reference will allegedly not work,.

Firstly, it is noted that the Applicants' contention that, "In the AAPR arrangement, when a lid of the pod is opened together with a door of the device manufacturing apparatus, electromagnetic waves will leak from the device manufacturing apparatus through the pod" assuming arguendo to be true is not commensurate in scope with the presently recited claims none of which recite any thing about the leakage of claims or not.

Secondly even if the limitation is recited in the claims (a) a particular use limitation ( prevent leakage cannot be given patentable weight), and secondly a method step limitation ( apparatus performing certain steps i.e chamber performing the steps wherein no leaking occurs ) cannot be given patentable weight in device/product claims except for very limited circumstances ( e.g reciting in proper format with enough supporting structural elements to support the function) not present in Applicants' claims .

Applicants' arguments are not persuasive.

Applicants' arguments with respect to claim 28 are also based on impermissible and on improper piece meal analysis of individual refines whereas the rejection is based on the combined teachings of AAPR ( primary

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reference ) and Drake ( Secondary reference). See In re Keller 208 USPQ 871( CCPA 1981).

Applicants' contend that in AAPR electromagnetic waves will leak in the AAPR arrangement when the lid of the pod is opened together with a door of the device manufacturing apparatus to which the pod is attached.

The above reasons are incorporated here by reference and it is noted that the limitation Applicants allege to be distinguishing is not recited in the claims.

Drake only discloses a capacitive feed arrangement for a plasma reactor in which RF power can leak through a dielectric ring is inserted between an upper electrode and a lower electrode of the environment outside the chamber.

The above reasons are incorporated here by reference and it is noted that the limitation Applicants allege to be distinguishing is not recited in the claims.

Applicants' arguments with respect to claims 41 and 47 and their dependent claims are moot in view of Applicants' canceling claims 34-52 in the Supplemental Amendment .

Applicants' were shown to be not persuasive for reasons set out at length and explained at the at least two/three interviews, and incorporated here by reference for the sake of brevity.

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Dependent claims were alleged to be allowable because of their dependency upon allegedly allowable independent claims.

However as shown above the independent claims are not allowable, therefore dependent claims are also not allowable.

Therefore all pending claims 22 to 33 are Finally rejected.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

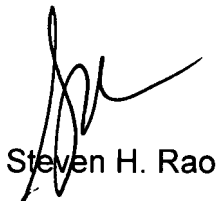
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is (571) 272-1718. The examiner can normally be reached on 8.30-5.30.

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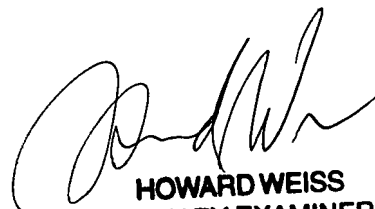
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on 571-272-1714. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Steven H. Rao

May 07, 2007.



**HOWARD WEISS**  
**PRIMARY EXAMINER**